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Mr. Harry C. Eisenbeiss  
Director  
Central Reference Service  
Central Intelligence Agency  
Washington, DC 20505

Dear Mr. Eisenbeiss:

Thank you for your letter of invitation of 31 January 1975. I am planning to attend the SAFE review on 19-20 February. I shall not attend the 1975 Computer Science Conference and will want instead to talk with some of the analysts and others in the environment.

I have no doubt of the feasibility and desirability of the goals set for SAFE. On the other hand, in order to have assurance that the goals will be met on time and within budget, one has to have a lot more information than we were provided as to how the actual programming will be done. For your information and comment to the SAFE Technical Advisory Panel (TAP), I enclose copies of three papers dealing with the organization of programming and of programs. I would like to know in some detail whether the SAFE design team expects to use such an approach, and exactly how. I note in the report "The proposed acquisition and installation schedule is ambitious and meeting it will require extraordinary effort." Hence my concerns about the mechanism.

Another item I hope to cover at the TAP meeting is the question of local ultrastrip files. I don't think that we had an adequate demonstration of the feasibility of a totally centralized system (including peak-load factors, reliability, etc.) vs. a system which has hundreds of local comprehensive ultrastrip files and viewers, and which uses the central system for scanning and pointing, as well as for intelligence aged hours instead of days.

The third major question I would like to see addressed is that of security. Given that the system will be used by fully cleared personnel, and primarily locally (and where not locally, the access will be by encrypted line from a terminal in a physically secured and cleared area), one always has to reckon with the possibility that there may be one direct enemy agent on the staff. Against such a threat, one wants to limit the amount of potential loss, and one wants to have available tools for monitoring and detecting grossly unauthorized access. I remembered that such things had been worked on long ago in IBM (and probably elsewhere) and indeed the IBM Resource Security System (RSS) was

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announced as a controlled release and is probably available in your own shop, but certainly (I understand) at Fort Meade. I understand that this provides strongly centralized control of the authorization scheme. I believe earlier aspects of these facilities were prepared for OS-18 and incorporated in OS-21. They are now said to be in VS2 (release 2), but as I pointed out in my first letters, my involvement on TAP is to provide judgment and not primarily information. Therefore, I want to put the question again--"To what extent will Resource Access Control be necessary, and what are the options for implementing it on the required timescale?"

Sincerely yours,



Richard L. Garwin

enclosures:

undated F. T. Baker and H. D. Mills, "Chief Programmer Teams."  
12/00/74 E. Yourdon and R. Abbott, "Programmers Are Paid To  
Program, Enter Program Librarian," Infosystems, pp 28-32.  
undated H. D. Mills, "On the Development of Large Reliable  
Programs."

cc: H. E. Bamford  
D. E. Bitzer  
W. J. Perry